



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/542,782	04/04/2000	Joseph R. Little	4298US(99-0996)	6869
7590	04/25/2006		EXAMINER YAM, STEPHEN K	
Brick G Powe Trask Britt & Rossa P O Box 2550 Salt Lake City, UT 84102			ART UNIT 2878	PAPER NUMBER

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/542,782

Applicant(s)

LITTLE, JOSEPH R.

Examiner

Stephen Yam

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This action is in response to the decision by the Board of Patent Appeals and Interferences filed on February 28, 2006. Prosecution is hereby re-opened, and Claims 1-60 are currently pending. Per the decision by the Board of Patent Appeals and Interferences mailed on February 28, 2006, the rejection of Claims 1-20, 22, 24-31, 34, 35, 39-60 are upheld accordingly.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21, 23, 32, 33, and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pramanik et al. US Patent No. 5,852,497 in view of Applicant's admitted prior art (AAPA).

Regarding Claim 21, Pramanik et al. teaches (see Fig. 2A) a method for a semiconductor device substrate (202) comprising identifying a mark (see Col. 3, lines 43-52) comprising at least one recess (206) within a surface of the semiconductor device substrate and covered with at least one layer of material (210) substantially opaque to at least some wavelengths of electromagnetic radiation (see Col. 4, lines 54-56), by scanning (see Col. 4, line 65 to Col. 5, line 2, Col. 5, lines 27-39) electromagnetic radiation of at least one wavelength across at least a portion of the semiconductor device substrate having the recess, the at least one wavelength capable of at least partially penetrating (see Col. 4, lines 54-56) the material, measuring (see Col. 3, lines 39-42) an

Art Unit: 2878

intensity of radiation of at least one wavelength reflected by different locations of said at least a portion of the semiconductor device substrate, detecting (see Col. 7, lines 56-67 and Col. 8, lines 6-9) locations at which said intensity changes from substantially a baseline intensity, and correlating (see Col. 3, lines 51-52) each location at which said intensity changes to identify the mark (see Col. 1, lines 63-65 and Col. 10, lines 38-40). Pramanik et al. do not teach identifying a predetermined destination for the semiconductor device substrate based on the mark. AAPA teaches providing an identification mark on the surface of a semiconductor substrate and identifying a predetermined destination for the semiconductor device substrate based on the mark (see Page 3, lines 1-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide additional identification markings similar in structure to the recessed mark of Pramanik et al. to identify a predetermined destination for the semiconductor device substrate based on the mark, as taught by AAPA, in the method of Pramanik et al., to provide identification for a particular semiconductor device substrate and properly route and transfer the substrate to a proper process location, as taught by AAPA (see Page 2, lines 21-29 and Page 3, lines 1-9).

Regarding Claim 23, Pramanik et al. teach scanning effected over a portion of the wafer comprising semiconductor material (silicon substrate) where the mark is located (see Fig. 2A).

Regarding Claim 32, Pramanik et al. teach the scanning effected from above the substrate (see Fig. 2A).

Regarding Claim 33, Pramanik et al. teach the scanning effected at a non-perpendicular angle relative to the substrate (see Fig. 2A).

Regarding Claim 36, Pramanik et al. teach the intensity measurement using a reflectometer (see Col. 3, lines 39-43 and Col. 5, lines 46-50).

Regarding Claim 37, Pramanik et al. teach identifying the location in which said electromagnetic radiation was reflected ( $\theta_2$ ,  $\theta_3$  – see Fig. 2A and Col. 6-8).

Regarding Claim 38, Pramanik et al. teach identifying the location in which said electromagnetic radiation was directed ( $\theta_1$  – see Fig. 2A and Col. 3, lines 38-43).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Yam whose telephone number is (571)272-2449. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571)272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SY  
SY

*Approved*  
*Janice A. Falcone*  
JANICE A. FALCONE  
DIRECTOR  
TECHNOLOGY CENTER 2800